

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
24 June 2004 (24.06.2004)

PCT

(10) International Publication Number
WO 2004/053644 A3

(51) International Patent Classification⁷: **G06F 3/00**

(74) Agents: **ALEMANNI, John, C. et al.**; Kilpatrick Stockton LLP, 1001 West Fourth St., Winston-Salem, NC 27101 (US).

(21) International Application Number:
PCT/US2003/038868

(22) International Filing Date: 8 December 2003 (08.12.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/431,662 8 December 2002 (08.12.2002) US

(71) Applicant (for all designated States except US): **IMMER-SION CORPORATION** [US/US]; 801 Fox Lane, San Jose, CA 95131 (US).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

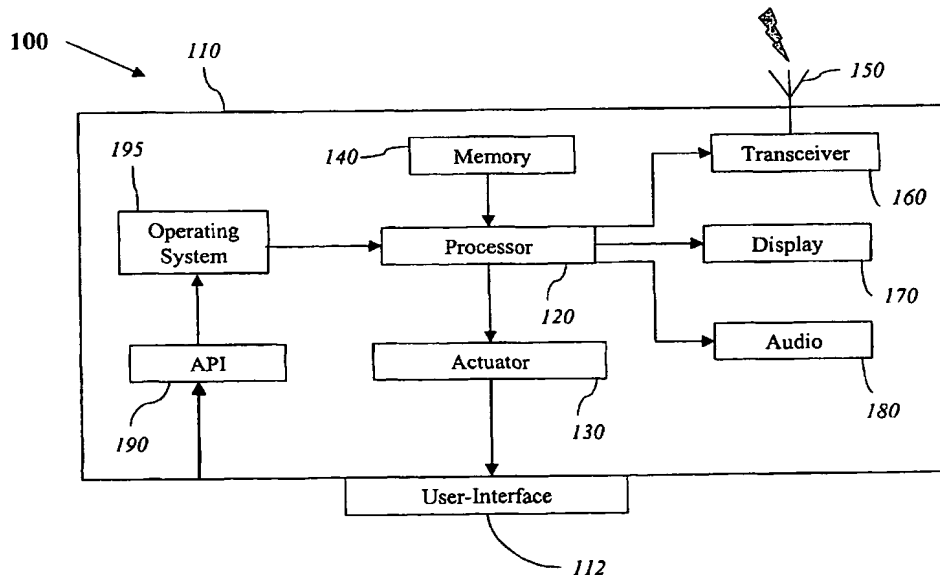
(75) Inventors/Applicants (for US only): **GRANT, Danny** [CA/CA]; 6678 Chateaubriand, Montreal, Québec H2S 2N7 (CA). **EID, Jeffrey** [US/US]; 105 Shadwell Drive, Danville, CA 94506 (US). **ENDO, Shoichi** [JP/US]; 20268 Northwest Square, Cupertino, CA 95014 (US).

Published:

— with international search report

[Continued on next page]

(54) Title: USING HAPTIC EFFECTS TO ENHANCE INFORMATION CONTENT IN COMMUNICATIONS



(57) Abstract: Embodiments of the invention relate to methods and systems for providing customized "haptic messaging" to users of handheld communication devices (100) in a variety of applications. In one embodiment, businesses and organizations may each be associated with a distinct haptic logo and include their haptic logos in various messages sent to the handheld communication devices (100) of their customers. In another embodiment, haptically enabled avatars can be used in a chat session between users of handheld communication devices (100).



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(88) Date of publication of the international search report:
11 November 2004

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/38868

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G 06 F 3/00

US CL : 710/1,5

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 710/1,5

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

IEEE Xplore

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,359,550 B1 (BRISEBOIS et al) 19 March 2002 (19.03.2002), column 2, lines 48-67; column 3, lines 1-10 and lines 41-58; column 4, lines 13-55; column 5, lines 39-67; column 6, lines 1-8.	1-4,8-11, and 17-23
X	WO 02/03172 A2 (CHANG et al) 10 January 2002 (10.01.2002), line 5 of page 7 to line 36 of page 17	5-7,12-14,24, and 25
Y		26-28
Y,E	US 6,710,518 B2 (MORTON et al) 23 March 2004 (23.03.2004), column 2, lines 42-67; column 3, lines 1-22	26-28

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

08 July 2004 (08.07.2004)

Date of mailing of the international search report

27 SEP 2004

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Facsimile No. (703)305-3230

Authorized officer

Jeffrey A Gaffin

Telephone No. 703 305-3900

James R. Matthews

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/38868

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claim Nos.: 15 and 16
because they relate to subject matter not required to be searched by this Authority, namely:
The preamble of claims 15 and 16 are directed toward, "a data stream embodied in a carrier signal." The claims are non-statutory as there is no tangible medium in the claim in which the data stream is located.
2. ☐ Claim Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claim Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐
☐

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.